FIG. 9A

CTCGATCCCATTGCAATGGTATGATTAGCTATCAAACGAAAGAAAGAGATGGCATGTGCC
CTGTGTGTCATCCCTCACTGGCTTGGCGAATGGCGATACCGAGTTAGGTAGAGTGTTTTT
TTAGCATGATGTCTGCCGGCACTGCCAAGAAAACTGCGTGCAGCGGACTGCAGGAGAGTT
GAGCGATGCATGCTTTGTGATGAGCGGAGCTGAGTGGGTGTCACTAACTGAACCCAATCA
GCATTGGGTGAGTCGAGTCGAGAAGCATCATGCTTCCTGCGTCCCGATCCGCTTATCTTT
TTCTCCCAAATTATTAAAGAGGGATAGATGATGGTGTGCTGGGTTGGGTAGAGTACGTGC
ATAGAACCAAAGCGAGGCGCCGAAAATATGCCGGGGATAATGGTGGCAGGCCGCAACGGC
CACGCCCGTCAGCTGGCAGCGGCGTGCCAGAGCGTGCCAGAGCGTGCGCGCGTGCGTGCT
TCTTGCTGCCGGCCCCGGTTCGTGTGCGGTCAGAGCAACGGCTATATAGGACCGTCAATC
ACCGCTACTCAATCCGTCCCCAACTCGTTTCCTATTACCGCTACTAGTAGTATTCCTGGT
GTAGTCTAGTAGTACTCCTCCTCCTCCTTCTCCTCCTACCCGTTTCCTCATGGCCACCGT
ACGCCAGAGCGACGGAGTCGCCGCGAACGGCCTTGCCGTGGCCGCAGCCGCGAACGGCAA
GAGCAACGGCCATGGCGTGGCTGCCGCCGTGAACGGCAAGAGCAACGGCCATGGCGTGGA
TGCCGACGCGAACGGCAAGAGCAACGGCCATGGCGTGGCTGCCGACGCGAACGGCAAGAG
CAACGGCCATGCCGAGGCCACTGCGAACGGCCACGGCGAGGCCACTGCGAACGGCAAGAC
CAACGGCCACCGCGAGAGCAACGGCCATGCTGAGGCCGCCGACGCGAACGGCGAGAGCAA
CGAGCATGCCGAGGACTCCGCGGCGAACGGCGAGAGCAACGGGCATGCGGCGGCGGCGGC
AGAGGAGGAGGAGGCGGTGGAGTGGAATTTCGCGGGTGCCAAGGACGGCGTGCTGGCGGC
GACGGGGGCGAACATGAGCATCCGGGCGATACGGTACAAGATCAGCGCGAGCGTGCAGGA
GAAGGGGCCGCGGCCCGTGCTGCCGCTGGCCCACGGGGACCCGTCCGTGTTCCCGGCCTT
CCGCACGGCCGTCGAGGCCGAGGACGCCGTCGCCGCCGCGCTGCGCACCGGCCAGTTCAA
CTGCTACCCCGCCGGCGTCGGCCTCCCCGCCGCACGAAGGTAACAACAACAACAACACAA
GAACAATTTCCTTTTCGCGTGTCGTGTCGCGCGGCAATCCATGCATGCGCATGTGCCGCT
TTCACGTGTCCGTCCGTCCGTCCACCGTTCCTTCCTCCTCCCTACGCCCATGAGAAATCT
GACCTTCTCCCACCTTATACCAAACAAAACAAAAAAACACAGCGCCGTGGCAGAGCACCT
GTCGCAGGGCGTGCCGTACATGCTATCGGCCGACGACGTCTTCCTCACCGCCGGCGGGAC
CCAGGCGATCGAGGTCATAATCCCGGTGCTGGCCCAGACCGCCGGCGCCAACATTCTGCT
CCCCAGGCCAGGCTACCCAAACTACGAGGCGCGCGCCGCGTTCAACAGGCTGGAGGTCCG
GCATTTCGACCTCATCCCCGACAAGGGGTGGGAGATCGACATCGACTCGCTGGAATCCAT
CGCCGACAAGAACACCACCGCCATGGTCATCATAAACCCCAACAACCCGTGCGGCAGCGT
TTACTCCTACGACCATCTGTCCAAGGTTTCACATCCTTTGCCTTGCTGAATATGGATTCA
GTTCAGTGCACCTGCTGAATTCTTTTTGCCAATCGCATACTGACTGATGTTGCTCAATTA
GGTCGCGGAGGTGGCGAAAAGGCTCGGAATATTGGTGATTGCTGACGAGGTATACGGCAA
GCTGGTTCTGGGCAGCGCCCCGTTCATCCCAATGGGAGTGTTTGGGCACATCACCCCTGT
GCTGTCCATAGGGTCTCTGTCCAAGTCATGGATAGTGCCTGGATGGCGGCTTGGATGGGT
AGCGGTGTACGACCCCAGAAAGATCTTACAGGAAACTAAGGTACTTAAATCTCTATATCA
TTCTTTTCAAATGCTACTAAGGTGATTAATTAGTACTACTGTACAATATATTTGCTAAAT
TTGTACTGACATTTTTGTGGTAGATCTCTACATCAATTACGAATTACCTCAATGTCTCGA
CAGACCCAGCAACCTTCATTCAGGTCAGTCTTTGGTATTTACCTCGTTTCAAGAAATAAA
GTCTTTGGTATTTACTCCTCCTTGTCCTATTTTGCTCCGGTCCCTATGTTGTAGGCAGCC
CACGTGCATGTCAAGTGACCGTTTTTTCACATTAAGTTTGAAAGTCAAAGTCAGACACAT
ACACTTGTAGTTATTTTACCTTTGTTTGCTTTGATCCGATAAAATAAAAAAATACAAAAA
CTGAACCTACTGTTGAATATAACCACTGTTCTTACAAGATATACATGATTGCACTATGGG
CATGCCATATTCTTTTGGGTCAAGTATGCAGTATGTTGGAACCTCTTTTAGAAAATAGAT
ACATTGTACTATGAGTATACCATTTTATTAAGAATTTCATATTTTGATATCCTTGATGGT
ATTGTTCTCTTGTGATTCACACGATTTACTTGTGGTTTTTTGTACTATCAAATTGTTCAG
GCAGCTCTTCCTCAGATTCTTGAGAACACAAAGGAAGATTTCTTTAAGGCGATTATTGGT
CTGCTAAAGGAATCATCAGAGATATGCTACAAACAAATAAAGGAAAACAAATACATTACA
TGTCCTCACAAGCCAGAAGGATCAATGTTTGTCATGGTAAGCCTATTTTGTGAAGTAAAA
AAATCTTAGGGAGTGTCAGTAATCATAAACTTATTTATATAGGATTAATCTGGGACCGAA

FIG. 9B

ATGCATCCAACATAATTACTTCAAATTCAAATTCAAATTACATTCTTCCGTACATATTTT
TGAAGATGCATGTATTTTAAGAATAATGACGAGAGCTAAAGTTATGCTACGACTAATCAT
CTGGATATCCTTTGTCCATCTTTTTGTTATACTGTGGAATGTTAATGGTCAAATCATATT
ACACAAATATCCATGCTAGTTTCTAGAAAGATTGATTATTTTTCTGTAACCATGAACTCC
GTATTAACTTCCATGTAAACAGGTGAAACTGAACTTACATCTTTTGGAGGAAATAGACGA
TGACATTGATTTTTGCTGCAAGCTCGCAAAAGAAGAATCAGTAATCTTATGCCCAGGTAG
GAATCCATTGTTGATTTTTGACTGTATATGAAGTTCTTATCAATTTCCGAGATGACTATA
CATATAAATGATTACCATATTATGGTCAGAAATTGTATAACAGTGTTAGAATATTCTGTG
AAGACTTTTTTAACACAATATTCTGTGAAGACTAGATATCATGTACTTCTCCTTGTTTTC
TTGACCTGATGTCCTTCGTCACATGTTGTGCTCCTCACAAAAAAATAGCAAGCACATGTT
TCAAATAATTGTTAATAATATAATTTAGCCTTTAATTTATATGGTTCTATTTTGAGATAT
TTTTGTAGTCCAACTTATATATTTGTGACTATTCTCAAAAACAAAACTTATATATGTGTG
CCTCTCAAATGTAGGGAGTGTTCTTGGAATGGCAAACTGGGTCCGCATTACTTTTGCTTG
TGTTCCATCTTCTCTTCAAGATGGTCTCGGAAGGATCAAATCATTCTGTCAAAGGAACAA
GAAGAGAAATTCGAGCGATGATTGCTAGTTGTATATCTGACTGAAGCTGTAAATCATTCC
CAGTATCCCCATCTATATCTTTCAATAAAATGGAACTTTTAGTTCTCTATGAATAGAAGT
CAACATCTCCTTGAATATGTTCTGGTTGTTGTGGCCTGGACGAAACATAGTGAATGTTAT
GTTAGTGAAGTTACATTGGCGTCGAAGATCTTTGAAGTTTTTTTTTTTTTTTGGGGGGGG
GGGGGGGGGGTGCTTTGATATTACTCTTAAGTACACGTTCTCTCAAGTTATGTCAAAGCA
CTTTGTAAACAATTGTAGATTTGGTATCATGATATGGATTAAACTAGTCAGATACTTGGT
AAGCACAAACCCTACCTATGTTAGGCTCACTAAGGTGGCGTTTGGTTCGAGAGAGAGGAA
GGATCAGTTGATGATATCCCCAATCATCGAAGTAAATCATGTGTTGTTGCTACCACTTTT
CTACAATCCTAGTAGCTGCATGCGTTGAGCTACTGATCAACACCACTGCACAACCATATT
CTCTGTGCAAAATCGGCACCCAAAGATTACATCTCACAGCTGAAGCAACCACCAAATTTG
AAGAGAGGAACCCTCACAAAGACCTTTGAGTGCCCCCCACAATGCATGGTTAGGCCGCCG
TCGCAGGCCGGAGTGGTCACCATGCGGACCAACACCAACTCCAACGGGGGAGCACGTCAC
CGATTACTGAAATTCCCCAAACAATTCTTAATTTGTGAACAAAATTTAAAAACAGGAACA
ATTTTTGAATTTGTGAACAAATTTTTTAAACGGGTATTCCTGAACATTTTTCAAAATTGT
GATCAAAATTTTAAAACGACTTCTTTCTCAAATTTGAGCAATATTTAAAATTATAAAAAA
GTTCAACAATTTTGAACTTTTTAAAAATTAGCGAGAACATTTTGAAATTCTAAATATTTT
CGAATTTGGAACATTTTTTCTATTTCTGAACAAAAATTGAAAATACGAACGTAATTTGGA
ATAAATTTTGGAAAATGCGATTTTTTGAAATTTCTGAACATATTTTGAAAAACAAAAAAA
CTTTAAAAGGTAAAATAAAAATAAAATAAAAATAGAAACATAAAAATAAGCAAAAAAATA
AAAGAAATCCGAGAAAAGCCAACTGGGAATAGCACATGGAAAAACCCAGCCGTCCGCCGC
ACTGTGTAAAGCTATAAGTGAGCCGGCCCAAGCCTCGTCGTCTCATCATACCCTGTGCGA
AACCCCGACAATTCGTTGCACTATGCGGCGAATAGGCTTTTCCAGGAGCTCCTGTCTTCC
GGTTATGGGTCATTTGCACACCCCTCCTCCACTTGGGCCAGGCTATTATACTTTTTTTCC
TTCTTTCGACCTCACGTTACTACGCCAGTTTAGTTTTTGGAAGCGACCAACCGGTTTTGT
GAAGGTTCTAGAAACTCAACCATTTTTGGGAAGCTTCTAGAAGCCTATGAATGTTTCTTT
TGGACATGTATTATTTGTGTTTTTTCTTTTTCAAATTGCACAATCTTTTTTCAAATTCAT
GATTTTTGTGAAACTTGTGATTTTTTGAATCCGTGATTTTTTTTCCTAAATCCGTGTTTT
GAAAAAAACTGTGGACTTTTCCGAAATTAATGAACATTTGTTTGCAAGATCGATGATCCT
TTTCAAATGAGCGATTTTTTTCTAAAATATCCACATATTTTTCATATTCATAAGCTTTCC
TTTTAATCGTGAACTATCTTAGCATTTGGTGAACTTTTATTAATTTTCTTTATAAAATGA
TTTTTTTTCAAAAGCCAACGGTTAACGGTTGACCGCTGAACCACAACCACAAACCGGGGA
AACCATTGACTCGCTGAACAGGGCAGGGCTTTCATATGATTGGGTGGTCTAATACCAGCG
CCCCTGACTACTAAACGAAGGAATTGCAAATTTTACCAACCACTACTATGGTAAAAAATG
AATATCACGATAAAAAAGGGGAAAAAAAACTATACCCTGAAAATCCCTCTGTTTCTAAAT
ATTTGTTGTTGGGGAGAACTAATCTGAAAGAACTAATCTAGTTCTCCGCAATAACAAATA
TTATGATTCGGGGGGAGTATAACTATTACACGATCAACCAAAGAATGTCCTCCAAGAAAA
ACCCAAAGAAAGTGCTAGAGTTTTGTTTTCAAGGACCGAAAGATAGAGATAGCATTCTGA
ATTACCTGCATCTTTTTTCCCAAGGATTGAAAGAAAGAGATAGAATTCTGAATTAGGTGCG

FIG. 9C

GAGATATCATTTCTGGATTAGGTACAATTGTTTTGCCGGCACAGCCAAACCCCGCAGTGG
AGCCGGAATTGGAATTGAGTGGGTGGAGTCGAGAAGCATGGTTCATGCGTTCTCAAAGAG
TGTAGCCAGTAGTGTGTGCTCCTTGGTGCTGGAGCTGCATATACAAGTACATAAAACAAA
GACGATCAGCTGGCAGCGTGCCTGCATGCGTGCTTCTTGCTGCCGCCCCGGAAGCCCCGG
TTGATGTGCGCAGGCGAGTGGCGACGGGACCGACGGCTATAAAGCACGGCCAAGCACCGC
CGCCGTTCTCAATCCATCCATCCCTTAGCTGATTTGATTGACTAGCTAGTTCATTCCCTG
CCACACTGCTAGTACTCCTCCTCGTTTCCTCGTGGCAATGGTACACCAGAGCAACGGCCA
CGGCGAGGCCGCCGCCGCCGCCGCCAACGGCAAGAGCAACGGGCACGCCGCCGCCGCGAA
CGGCAAGAGCAACGGGCACGCGGCGGCGGCGGCGGTGGAGTGGAATTTCGCCCGGGGCAA
GGACGGCATCCTGGCGACGACGGGGGCGAAGAACAGCATCCGGGCGATACGGTACAAGAT
CAGCGCGAGCGTGGAGGAGAGCGGGCCGCGGCCCGTGCTGCCGCTGGCCCACGGTGACCC
GTCCGTGTTCCCGGCCTTCCGCACGGCCGTCGAGGCCGAGGACGCCGTCGCCGCCGCGCT
GCGCACCGGCCAGTTCAACTGCTACGCCGCCGGCGTCGGCCTCCCCGCCGCACGAAGGTA
ACATTTACAGCTTCACCGTAATGTATGCGTGAGCATGCATGCGCCGGTTTACTTACGTGC
CCGCCGCTGTTCTTCCCCGGTGCGTTCAAAATTTTAACCTTCTATAAGTACCTTATAAAA
ACAAACAGCGCCGTAGCAGAGCACTTGTCACAGGGCGTGCCCTACAAGCTATCGGCCGAC
GACGTCTTCCTCACCGCCGGCGGAACTCAGGCGATCGAAGTCATAATCCCGGTGCTGGCC
CAGACTGCCGGCGCCAACATACTGCTTCCCCGGCCAGGCTATCCAAATTACGAGGCGCGA
GCGGCATTCAACAAGCTGGAGGTCCGGCACTTCGACCTCATCCCCGACAAGGGGTGGGAG
ATCGACATCGACTCGCTGGAATCCATCGCCGACAAGAACACCACCGCGATGGTCATCATA
AACCCAAACAATCCGTGCGGCAGCGTTTACTCCTACGACCATCTGGCCAAGGTTTTGCAT
CCATGCATCCTCTGCCTCGTTGATCGACCGGTCTGTTTGAACATAGTATATGGATTGCGT
TTGCTAATCGTGTGCTGATGATGCTGTTTGGTTATCAGGTCGCGGAGGTGGCAAGGAAGC
TCGGAATATTGGTGATCGCTGACGAGGTTTACGGCAAACTGGTTCTGGGCAGCGCCCCGT
TTATCCCGATGGGCGTCTTTGGGCACATTGCCCCGGTCTTGTCCATTGGATCTCTGTCCA
AGTCGTGGATAGTGCCTGGATGGCGACTTGGATGGGTGGCGGTGTACGACCCCACAAAGA
TTTTAGAGAAAACTAAGGTAGCTTTAGCTCCCTATCATTCTTCTCATATGCTACTGTGGG
GATTAGTATTTTTGCTAAATTTGTACTGCCTTTGTTTATTCAGATCTCTACGTCTATTAC
GAATTACCTTAATGTCTCAACGGACCCAGCAACCTTCGTTCAGGTTAGTCTTTGGTTCTT
GCCCTATTTTGCTCATGTCCCTGTGTTGCATGTCAAATGACCGGCTTCAAGTTAGTATAT
AGAGTTTTTGTTAAGTGTGAATGTCGAAGTCCAACATGATGGAAGAAAGATACATCTATT
TTTAGTCATTCCCCTTTGTTTGTTTGATTCCATAAAATAAATAAACACAAAGCCAGAACC
AACTATTGAATAGAACTATTTTTCTTAGAAAATATACATTGTATTTTGAGCATGCCATAT
TCTTTTCGATCAAGTATGCAATATATTAAAACTTGCATTGTACTACGAGTATACCATGTT
GTTAAGAATTTCTTTACCTACAACACCTTGTCTCGCATCTTCATATTTTGATATCCTTGA
CATTATTGTTCTCTTATGATTCACACAACTTAATTATGGATTTTTGTGCTATCAAATTGT
TTAGGAAGCTCTTCCTAAAATTCTTGAGAACACAAAAGCAGATTTCTTTAAGAGGATTAT
TGGTCTACTAAAGGAATCATCAGAGATATGTTATAGGGAAATAAAGGAAAACAAATATAT
TACGTGTCCTCACAAGCCAGAAGGATCGATGTTTGTAATGGTAAGCTAAGCATAGACTTA
CTTTTTAAGGTTAATCTGGGATCTCAGTGCATCCAACAAACAATCAAATCAAAATATAAT
TATGTTTTGCTATGGATCTTTTTTGAAGATGCATGCATTTGAAGAATAATGAAGAGAGTTG
AAATTATTTTAGGACTAATCTTCCTGATATCATTTGTCCATTTTTTTTGTTATTACTGTAA
ATTGGTAACACTCAAATCATATTACAAAAAGTTTCCTCCCATTTTTAGTAAGATTGACTT
CCTTTCTATAACCATGTATTAACTTCCATGTAAACAGGTCAAACTAAACTTACATCTTTT
GGAGGAGATCCATGACGACATAAATTTTTGCTGCAAGCTCGCAAAGGAAGAATCTGTAAT
TTTATGTCCAGGTAGGAATGTATATGGCCATTTTAAAGGAAAACTATATGGAATAATAAT
ATCTTCTTGTTATACTAAACAATACTTCCTCCATCCTAAAATAAATGTCTTACACTTAGC
ACAATTTTATACTAGATCTAGTACAAAGTTGAAACAGTTATTTTGGGACAGAGGGAGTAG
TATATATTGTGTGAGAACATAAGGTTATGTTTGACTGATATATGCTTCTTAAATGTGAAA
CATGTTCTCTTATGTTTTTTGATTGTATACGAAGTTCTTATCAGTTTCCGAGATGACTAC
ACATAAATGATTACCATATCATTGTCAGAAAATGTATTACCACATTAGAATATTCTTTCT

FIG. 9D

TCGTTACATGTTTGTGCTTCTCACAAAAATAATAATACCAAGCACATGTTCCAAATGATT
ATTAATAATTTTGAGGTGTTTTTCAACCAACTTATATACTTTCATAGTTCTAAAAAAACC
GTATATATGGTTAACTCTAACAAAAACTTATATATGTTTTCTCTCTAATACAGGGAGTGT
TCTTGGAATGGAAAATTGGGTCCGTATTACTTTTGCCTGCGTTCCATCTTCTCTTCAAGA
TGGACTCGAAAGGGTCAAATCATTCTGTCAAAGGAACAAGAAGAAGAATTCTATAAATGG
TTGTTAGTTGTACACACCCCTAGTTGTACATCTGACTGAAGCTGTAAATCATTTCTAGTT
ATCCCCATTTATATATTTCAATAAAACATATTGTAATGGTTCTGTTGTAGCTGTCCAAGT
CATGTACTCTACTTTTTGATGTATTTGGCCTCATTGCCTTGCATCAGTTTCAATAAAAAT
GGTTGTGTACACAATGATGATGTAGAGGCGAGGTGTTTTGACCACCTTTTCAACAAAAAT
CTATATCTTTCAACAAATGAAACCTTGAGTTCCCTTTGAGTAGAAGTCAACATACTCCTT
GAATATGCTATGGTTTCCATGGTCTGGATGAAACATGATGAATAGAAGTGAAGTTATATC
CATGTCAAAGTTTTTTAATGTTTAATTTCATTATGAGAACTTTGATATTACTTCTAGCAC
ACATTCTCTGAAGTAATTGTCAGTTTGGTACTTGAAGGGACCTATATTTTTCCTATTGGG
GGGGGGGGGTGAATAGGCGGTTTATAACCAATTGTATATTTGAGAATATCTTAATGTGGA
ATTAAACTAGGTGAATATTTTTTTCCAATAAAGGGTGCTTTTATTGACTCACAATGTACCA
TCAAGGGATACAATCATAATGAGTACACAATCGACATCTACATAATCAGGTTGCATACGG
CCAACACACACACACGCACACACACATTCACACACACAAATCATGCTGACGAAGAGCGAA
GTCATACAAGATCAAAACTATGCCTAGGCGGAGGAAGAATAGAAAAACATGAAGAAATGA
AAAACCGTGACTGACAACATACTGACCATCGACGACAAACATCTGTAGACAACACAAAAA
CTGCGAGAAAAGTTCTATAAAACTGGCGCCTTCGAGAAGGAAACGACGTGCAAGAGTTGC
CATCATCGGATCCAACCACTAAGGTCATATCCTGGGTTTTCATCCTGAAGATCAAATCCG
AGCAAACTCCGAGTAATGTCTTTATTAGGGTAACGATTCAAAAAATGCCACAATCATGAG
TTATGACCAATTAGACCAGACCTAGGATTTTTATCCAAAGCTCGAGACGGGTACTCTAGA
AGTACCATCCAATTGAAGTCATCCCACTTGCCTCAATACAAATAGTTGCATAGATGCACG
GTCCATATGGCGAGTAATGGACATGAGCGCGCATGTGTAGGTTAACGTGACGTGACAAGA
GCCTGTCGCCACCACTCGACGAAGTGTTTGATGGGGAGGAAGAAGTATGGCTCCACCAAC
ATCCCAAGTTTGAAACATTCTAGAGCCCCTTACCATACTCACAAAGCGACAATTGATGAC
TATCTGTATCAGACGACAAATCCATGTCCGTCACTCGCTCTATCTTGGTCATTGACATAC
TACCTGGCAAAGGCGGATTCAAGCCCCAGACAGCCTGGGCGGCCGC

FIG. 10A

```
ctcgatcccattgcaatggtatgattagctatcaaacgaaagaaagagatggcatgtgcc
ctgtgtgtcatccctcactggcttggcgaatggcgataccgagttaggtagagtgttttt
ttagcatgatgtctgccggcactgccaagaaaactgcgtgcagcggactgcaggagagtt
gagcgatgcatgctttgtgatgagcggagctgagtgggtgtcactaactgaacccaatca
gcattgggtgagtcgagtcgagaagcatcatgcttcctgcgtcccgatccgcttatcttt
ttctcccaaattattaaagagggatagatgatggtgtgctgggttgggtagagtacgtgc
atagaaccaaagcgaggcgccgaaaatatgccggggataatggtggcaggccgcaacggc
cacgcccgtcagctggcagcggcgtgccagagcgtgccagagcgtgcgcgcgtgcgtgct
tcttgctgccggccccggttcgtgtgcggtcagagcaacggctatataggaccgtcaatc
accgctactcaatccgtccccaactcgtttcctattacCGCTACTAGTAGTATTCCTGGT 600

GTAGTCTAGTAGTACTCCTCCTCCTCCTTCTCCTCCTACCCGTTTCCTCATGGCCACCGT
                                                  M  A  T  V  NAAT-B

ACGCCAGAGCGACGGAGTCGCCGCGAACGGCCTTGCCGTGGCCGCAGCCGCGAACGGCAA
  R  Q  S  D  G  V  A  A  N  G  L  A  V  A  A  A  A  N  G  K

GAGCAACGGCCATGGCGTGGCTGCCGCCGTGAACGGCAAGAGCAACGGCCATGGCGTGGA
  S  N  G  H  G  V  A  A  A  V  N  G  K  S  N  G  H  G  V  D

TGCCGACGCGAACGGCAAGAGCAACGGCCATGGCGTGGCTGCCGACGCGAACGGCAAGAG
  A  D  A  N  G  K  S  N  G  H  G  V  A  A  D  A  N  G  K  S

CAACGGCCATGCCGAGGCCACTGCGAACGGCCACGGCGAGGCCACTGCGAACGGCAAGAC
  N  G  H  A  E  A  T  A  N  G  H  G  E  A  T  A  N  G  K  T

CAACGGCCACCGCGAGAGCAACGGCCATGCTGAGGCCGCCGACGCGAACGGCGAGAGCAA
  N  G  H  R  E  S  N  G  H  A  E  A  A  D  A  N  G  E  S  N

CGAGCATGCCGAGGACTCCGCGGCGAACGGCGAGAGCAACGGGCATGCGGCGGCGGCGGC
  E  H  A  E  D  S  A  A  N  G  E  S  N  G  H  A  A  A  A  A

AGAGGAGGAGGAGGCGGTGGAGTGGAATTTCGCGGGTGCCAAGGACGGCGTGCTGGCGGC
  E  E  E  E  A  V  E  W  N  F  A  G  A  K  D  G  V  L  A  A

GACGGGGGCGAACATGAGCATCCGGGCGATACGGTACAAGATCAGCGCGAGCGTGCAGGA
  T  G  A  N  M  S  I  R  A  I  R  Y  K  I  S  A  S  V  Q  E

GAAGGGGCCGCGGCCCGTGCTGCCGCTGGCCCACGGGGACCCGTCCGTGTTCCCGGCCTT 1200
  K  G  P  R  P  V  L  P  L  A  H  G  D  P  S  V  F  P  A  F

CCGCACGGCCGTCGAGGCCGAGGACGCCGTCGCCGCCGCGCTGCGCACCGGCCAGTTCAA
  R  T  A  V  E  A  E  D  A  V  A  A  A  L  R  T  G  Q  F  N

CTGCTACCCCGCCGGCGTCGGCCTCCCCGCCGCACGAAGgtaacaacaacaacaacacaa
  C  Y  P  A  G  V  G  L  P  A  A  R  S

gaacaatttccttttcgcgtgtcgtgtcgcgcggcaatccatgcatgcgcatgtgccgct
ttcacgtgtccgtccgtccgtccaccgttccttcctcctccctacgcccatgagaaatct
```

FIG. 10B

```
gaccttctcccaccttataccaaacaaaacaaaaaaacacagCGCCGTGGCAGAGCACCT
                                            A  V  A  E  H  L

GTCGCAGGGCGTGCCGTACATGCTATCGGCCGACGACGTCTTCCTCACCGCCGGCGGGAC
  S  Q  G  V  P  Y  M  L  S  A  D  D  V  F  L  T  A  G  G  T

CCAGGCGATCGAGGTCATAATCCCGGTGCTGGCCCAGACCGCCGGCGCCAACATTCTGCT
  Q  A  I  E  V  I  I  P  V  L  A  Q  T  A  G  A  N  I  L  L

CCCCAGGCCAGGCTACCCAAACTACGAGGCGCGCGCCGCGTTCAACAGGCTGGAGGTCCG
  P  R  P  G  Y  P  N  Y  E  A  R  A  A  F  N  R  L  E  V  R

GCATTTCGACCTCATCCCCGACAAGGGGTGGGAGATCGACATCGACTCGCTGGAATCCAT
  H  F  D  L  I  P  D  K  G  W  E  I  D  I  D  S  L  E  S  I

CGCCGACAAGAACACCACCGCCATGGTCATCATAAACCCCAACAACCCGTGCGGCAGCGT 1800
  A  D  K  N  T  T  A  M  V  I  I  N  P  N  N  P  C  G  S  V

TTACTCCTACGACCATCTGTCCAAGgtttcacatcctttgccttgctgaatatggattca
  Y  S  Y  D  H  L  S  K

gttcagtgcacctgctgaattctttttgccaatcgcatactgactgatgttgctcaatta
gGTCGCGGAGGTGGCGAAAAGGCTCGGAATATTGGTGATTGCTGACGAGGTATACGGCAA
  V  A  E  V  A  K  R  L  G  I  L  V  I  A  D  E  V  Y  G  K

GCTGGTTCTGGGCAGCGCCCCGTTCATCCCAATGGGAGTGTTTGGGCACATCACCCCTGT
  L  V  L  G  S  A  P  F  I  P  M  G  V  F  G  H  I  T  P  V

GCTGTCCATAGGGTCTCTGTCCAAGTCATGGATAGTGCCTGGATGGCGGCTTGGATGGGT
  L  S  I  G  S  L  S  K  S  W  I  V  P  G  W  R  L  G  W  V

AGCGGTGTACGACCCCAGAAAGATCTTACAGGAAACTAAGgtacttaaatctctatatca
  A  V  Y  D  P  R  K  I  L  Q  E  T  K

ttcttttcaaatgctactaaggtgattaattagtactactgtacaatatatttgctaaat
ttgtactgacatttttgtggtagATCTCTACATCAATTACGAATTACCTCAATGTCTCGA
                        I  S  T  S  I  T  N  Y  L  N  V  S

CAGACCCAGCAACCTTCATTCAGgtcagtctttggtatttacctcgtttcaagaaataaa
T  D  P  A  T  F  I  Q

gtctttggtatttactcctccttgtcctattttgctccggtccctatgttgtaggcagcc 2400
cacgtgcatgtcaagtgaccgtttttttcacattaagtttgaaagtcaaagtcagacacat
acacttgtagttatttttacctttgtttgctttgatccgataaaataaaaaaatacaaaaa
ctgaacctactgttgaatataaccactgttcttacaagatatacatgattgcactatggg
catgccatattcttttgggtcaagtatgcagtatgttggaacctcttttagaaaatagat
acattgtactatgagtataccattttattaagaatttcatattttgatatccttgatggt
attgttctcttgtgattcacacgatttacttgtggtttttttgtactatcaaattgttcag
GCAGCTCTTCCTCAGATTCTTGAGAACACAAAGGAAGATTTCTTTAAGGCGATTATTGGT
 A  A  L  P  Q  I  L  E  N  T  K  E  D  F  F  K  A  I  I  G
```

FIG. 10C

```
CTGCTAAAGGAATCATCAGAGATATGCTACAAACAAATAAAGGAAAACAAATACATTACA
 L  L  K  E  S  S  E  I  C  Y  K  Q  I  K  E  N  K  Y  I  T

TGTCCTCACAAGCCAGAAGGATCAATGTTTGTCATGgtaagcctattttgtgaagtaaaa
 C  P  H  K  P  E  G  S  M  F  V  M

aaatcttagggagtgtcagtaatcataaacttatttatataggattaatctgggaccgaa 3000
atgcatccaacataattacttcaaattcaaattcaaattacattcttccgtacatatttt
tgaagatgcatgtattttaagaataatgacgagagctaaagttatgctacgactaatcat
ctggatatcctttgtccatcttttttgttatactgtggaatgttaatggtcaaatcatatt
acacaaatatccatgctagtttctagaaagattgattatttttctgtaaccatgaactcc
gtattaacttccatgtaaacagGTGAAACTGAACTTACATCTTTTGGAGGAAATAGACGA
                       V  K  L  N  L  H  L  L  E  E  I  D  D

TGACATTGATTTTTGCTGCAAGCTCGCAAAAGAAGAATCAGTAATCTTATGCCCAGgtag
  D  I  D  F  C  C  K  L  A  K  E  E  S  V  I  L  C  P

gaatccattgttgatttttgactgtatatgaagttcttatcaatttccgagatgactata
catataaatgattaccatattatggtcagaaattgtataacagtgttagaatattctgtg
aagacttttttaacacaatattctgtgaagactagatatcatgtacttctccttgttttc
ttgacctgatgtccttcgtcacatgttgtgctcctcacaaaaaaatagcaagcacatgtt 3600
tcaaataattgttaataatataatttagcctttaatttatatggttctattttgagatat
ttttgtagtccaacttatatatttgtgactattctcaaaaacaaaacttatatatgtgtg
cctctcaaatgtagGGAGTGTTCTTGGAATGGCAAACTGGGTCCGCATTACTTTTGCTTG
              G  S  V  L  G  M  A  N  W  V  R  I  T  F  A  C

TGTTCCATCTTCTCTTCAAGATGGTCTCGGAAGGATCAAATCATTCTGTCAAAGGAACAA
  V  P  S  S  L  Q  D  G  L  G  R  I  K  S  F  C  Q  R  N  K

GAAGAGAAATTCGAGCGATGATTGCTAGTTGTATATCTGACTGAAGCTGTAAATCATTCC
  K  R  N  S  S  D  D  C  *
CAGTATCCCCATCTATATCTTTCAATAAAATGGAACTTTTAGTTCTCTATGAATAGAAGT

CAACATCTCCTTGAATATGTTCTGGTTGTTGTGGCCTGGACGAAACATAGTGAATGTTAT

GTTAGTGAAGTTAcattggcgtcgaagatctttgaagtttttttttttttttgggggggg

gggggggggtgctttgatattactcttaagtacacgttctctcaagttatgtcaaagca
ctttgtaaacaattgtagatttggtatcatgatatggattaaactagtcagatacttggt 4200
aagcacaaaccctacctatgttaggctcactaaggtggcgtttggttcgagagagaggaa
ggatcagttgatgatatccccaatcatcgaagtaaatcatgtgttgttgctaccacttttt
ctacaatcctagtagctgcatgcgttgagctactgatcaacaccactgcacaaccatatt
ctctgtgcaaaatcggcacccaaagattacatctcacagctgaagcaaccaccaaatttg
aagagaggaaccctcacaaagacctttgagtgccccccacaatgcatggttaggccgccg
tcgcaggccggagtggtcaccatgcggaccaacaccaactccaacgggggagcacgtcac
cgattactgaaattccccaaacaattcttaatttgtgaacaaaatttaaaaacaggaaca
atttttgaatttgtgaacaaatttttttaaacgggtattcctgaacatttttcaaaattgt
gatcaaaatttaaaacgacttctttctcaaatttgagcaatatttaaaattataaaaaa
gttcaacaattttgaacttttttaaaaattagcgagaacattttgaaattctaaatatttt 4800
cgaatttggaacatttttttctatttctgaacaaaaattgaaaatacgaacgtaatttgga
ataaattttggaaaatgcgatttttttgaaatttctgaacatattttgaaaaacaaaaaaa
ctttaaaaggtaaaataaaaataaaataaaaatagaaacataaaaataagcaaaaaaata
```

FIG. 10D

```
aaagaaatccgagaaaagccaactgggaatagcacatggaaaaacccagccgtccgccgc
actgtgtaaagctataagtgagccggcccaagcctcgtcgtctcatcataccctgtgcga
aaccccgacaattcgttgcactatgcggcgaataggcttttccaggagctcctgtcttcc
ggttatgggtcatttgcacacccctcctccacttgggccaggctattatacttttttcc
ttctttcgacctcacgttactacgccagtttagttttggaagcgaccaaccggttttgt
gaaggttctagaaactcaaccatttttgggaagcttctagaagcctatgaatgtttcttt
tggacatgtattatttgtgtttttttcttttcaaattgcacaatctttttcaaattcat 5400
gatttttgtgaaacttgtgatttttttgaatccgtgatttttttttcctaaatccgtgtttt
gaaaaaaactgtggacttttccgaaattaatgaacatttgtttgcaagatcgatgatcct
tttcaaatgagcgatttttttctaaaatatccacatatttttcatattcataagctttcc
ttttaatcgtgaactatcttagcatttggtgaacttttattaattttctttataaaatga
tttttttttcaaaagccaacggttaacggttgaccgctgaaccacaaccacaaaccgggga
aaccattgactcgctgaacagggcagggctttcatatgattgggtggtctaataccagcg
cccctgactactaaacgaaggaattgcaaattttaccaaccactactatggtaaaaaatg
aatatcacgataaaaaaggggaaaaaaaactataccctgaaaatccctctgtttctaaat
atttgttgttggggagaactaatctgaaagaactaatctagttctccgcaataacaaata
ttatgattcgggggggagtataactattacacgatcaaccaaagaatgtcctccaagaaaa 6000
acccaaagaaagtgctagagttttgttttcaaggaccgaaagatagagatagcattctga
attaggtccatctttttcccaaggattgaaagaaagagatagaattctgaattaggtgcg
gagatatcatttctggattaggtacaattgttttgccggcacagccaaaccccgcagtgg
agccggaattggaattgagtgggtggagtcgagaagcatggttcatgcgttctcaaagag
tgtagccagtagtgtgtgctccttggtgctggagctgcatatacaagtacataaaacaaa
gacgatcagctggcagcgtgcctgcatgcgtgcttcttgctgccgccccggaagccccgg
ttgatgtgcgcaggcgagtggcgacgggaccgacggctataaagcacggccaagcaccgc
cgccgttctcaatccatccatcccttagctgatttgATTGACTAGCTAGTTCATTCCCTG

CCACACTGCTAGTACTCCTCCTCGTTTCCTCGTGGCAATGGTACACCAGAGCAACGGCCA
                                        M  V  H  Q  S  N  G  H  NAAT-A

CGGCGAGGCCGCCGCCGCCGCCGCCAACGGCAAGAGCAACGGGCACGCCGCCGCCGCGAA 6600
  G  E  A  A  A  A  A  A  N  G  K  S  N  G  H  A  A  A  A  N

CGGCAAGAGCAACGGGCACGCGGCGGCGGCGGCGGTGGAGTGGAATTTCGCCCGGGGCAA
  G  K  S  N  G  H  A  A  A  A  A  V  E  W  N  F  A  R  G  K

GGACGGCATCCTGGCGACGACGGGGGCGAAGAACAGCATCCGGGCGATACGGTACAAGAT
  D  G  I  L  A  T  T  G  A  K  N  S  I  R  A  I  R  Y  K  I

CAGCGCGAGCGTGGAGGAGAGCGGGCCGCGGCCCGTGCTGCCGCTGGCCCACGGTGACCC
  S  A  S  V  E  E  S  G  P  R  P  V  L  P  L  A  H  G  D  P

GTCCGTGTTCCCGGCCTTCCGCACGGCCGTCGAGGCCGAGGACGCCGTCGCCGCCGCGCT
  S  V  F  P  A  F  R  T  A  V  E  A  E  D  A  V  A  A  A  L

GCGCACCGGCCAGTTCAACTGCTACGCCGCCGGNNTCGGCCTCCCCGCCGCACGAAGgta
  R  T  G  Q  F  N  C  Y  A  A  G  V  G  L  P  A  A  R  S


acatttacagcttcaccgtaatgtatgcgtgagcatgcatgcgccggtttacttacgtgc
ccgccgctgttcttccccggtgcgttcaaaatttaaccttctataagtaccttataaaa
acaaacagCGCCGTAGCAGAGCACTTGTCACAGGGCGTGCCCTACAAGCTATCGGCCGAC
          A  V  A  E  H  L  S  Q  G  V  P  Y  K  L  S  A  D
```

FIG. 10E

```
GACGTCTTCCTCACCGCCGGCGGAACTCAGGCGATCGAAGTCATAATCCCGGTGCTGGCC
 D  V  F  L  T  A  G  G  T  Q  A  I  E  V  I  I  P  V  L  A

CAGACTGCCGGCGCCAACATACTGCTTCCCCGGCCAGGCTATCCAAATTACGAGGCGCGA 7200
 Q  T  A  G  A  N  I  L  L  P  R  P  G  Y  P  N  Y  E  A  R

GCGGCATTCAACAAGCTGGAGGTCCGGCACTTCGACCTCATCCCCGACAAGGGGTGGGAG
 A  A  F  N  K  L  E  V  R  H  F  D  L  I  P  D  K  G  W  E

ATCGACATCGACTCGCTGGAATCCATCGCCGACAAGAACACCACCGCGATGGTCATCATA
 I  D  I  D  S  L  E  S  I  A  D  K  N  T  T  A  M  V  I  I

AACCCAAACAATCCGTGCGGCAGCGTTTACTCCTACGACCATCTGGCCAAGgttttgcat
 N  P  N  N  P  C  G  S  V  Y  S  Y  D  H  L  A  K

ccatgcatcctctgcctcgttgatcgaccggtctgtttgaacatagtatatggattgcgt
ttgctaatcgtgtgctgatgatgctgtttggttatcagGTCGCGGAGGTGGCAAGGAAGC
                                       V  A  E  V  A  R  K

TCGGAATATTGGTGATCGCTGACGAGGTTTACGGCAAACTGGTTCTGGGCAGCGCCCCGT
L  G  I  L  V  I  A  D  E  V  Y  G  K  L  V  L  G  S  A  P

TTATCCCGATGGGCGTCTTTGGGCACATTGCCCCGGTCTTGTCCATTGGATCTCTGTCCA
F  I  P  M  G  V  F  G  H  I  A  P  V  L  S  I  G  S  L  S

AGTCGTGGATAGTGCCTGGATGGCGACTTGGATGGGTGGCGGTGTACGACCCCACAAAGA
K  S  W  I  V  P  G  W  R  L  G  W  V  A  V  Y  D  P  T  K

TTTTAGAGAAAACTAAGgtagctttagctccctatcattcttctcatatgctactgtggg
I  L  E  K  T  K

gattagtatttttgctaaatttgtactgcctttgtttattcagATCTCTACGTCTATTAC 7800
                                          I  S  T  S  I  T

GAATTACCTTAATGTCTCAACGGACCCAGCAACCTTCGTTCAGgttagtctttggttctt
  N  Y  L  N  V  S  T  D  P  A  T  F  V  Q
gccctattttgctcatgtccctgtgttgcatgtcaaatgaccggcttcaagttagtatat
agagtttttgttaagtgtgaatgtcgaagtccaacatgatggaagaaagatacatctatt
tttagtcattccccttttgtttgtttgattccataaaataaataaacacaaagccagaacc
aactattgaatagaactatttttcttagaaaatatacattgtattttgagcatgccatat
tcttttcgatcaagtatgcaatatattaaaacttgcattgtactacgagtataccatgtt
gttaagaatttctttacctacaacaccttgtctcgcatcttcatattttgatatccttga
cattattgttctcttatgattcacacaacttaattatggatttttgtgctatcaaattgt
ttagGAAGCTCTTCCTAAAATTCTTGAGAACACAAAAGCAGATTTCTTTAAGAGGATTAT
     E  A  L  P  K  I  L  E  N  T  K  A  D  F  F  K  R  I  I

TGGTCTACTAAAGGAATCATCAGAGATATGTTATAGGGAAATAAAGGAAAACAAATATAT 8400
  G  L  L  K  E  S  S  E  I  C  Y  R  E  I  K  E  N  K  Y  I

TACGTGTCCTCACAAGCCAGAAGGATCGATGTTTGTAATGgtaagctaagcatagactta
  T  C  P  H  K  P  E  G  S  M  F  V  M
```

FIG. 10F

```
cttttaaggttaatctgggatctcagtgcatccaacaaacaatcaaatcaaaatataat
tatgttttgctatggatctttttgaagatgcatgcatttgaagaataatgaagagagttg
aaattatttaggactaatcttcctgatatcatttgtccatttttttgttattactgtaa
attggtaacactcaaatcatattacaaaaagtttcctcccatttttagtaagattgactt
cctttctataaccatgtattaacttccatgtaaacagGTCAAACTAAACTTACATCTTTT
                                      V  K  L  N  L  H  L  L

GGAGGAGATCCATGACGACATAAATTTTTGCTGCAAGCTCGCAAAGGAAGAATCTGTAAT
  E  E  I  H  D  D  I  N  F  C  C  K  L  A  K  E  E  S  V  I

TTTATGTCCAGgtaggaatgtatatggccattttaaaggaaaactatatggaataataat
  L  C  P

atcttcttgttatactaaacaatacttcctccatcctaaaataaatgtcttacacttagc
acaattttatactagatctagtacaaagttgaaacagttattttgggacagagggagtag 9000
tatatattgtgtgagaacataaggttatgtttgactgatatatgcttcttaaatgtgaaa
catgttctcttatgtttttgattgtatacgaagttcttatcagtttccgagatgactac
acataaatgattaccatatcattgtcagaaaatgtattaccacattagaatattctttct
ttttatgcaaagactagcatggcatgtacttttccttgtacctatgtgtctttttttttc
tcgttacatgtttgtgcttctcacaaaaataataataccaagcacatgttccaaatgatt
attaataattttgaggtgtttttcaaccaacttatatactttcatagttctaaaaaaacc
gtatatatggttaactctaacaaaaacttatatatgttttctctctaatacagGGAGTGT
                                                  G  S  V

TCTTGGAATGGAAAATTGGGTCCGTATTACTTTTGCCTGCGTTCCATCTTCTCTTCAAGA
  L  G  M  E  N  W  V  R  I  T  F  A  C  V  P  S  S  L  Q  D

TGGACTCGAAAGGGTCAAATCATTCTGTCAAAGGAACAAGAAGAAGAATTCTATAAATGG
  G  L  E  R  V  K  S  F  C  Q  R  N  K  K  K  N  S  I  N  G

TTGTTAGTTGTACACACCCCTAGTTGTACATCTGACTGAAGCTGTAAATCATTTCTAGTT 9600
  C  *
ATCCCCATTTATATATTTCAATAAAACATATTGTAATGGTTCTGTTGTAGCTGTCCAAGT

CATGTACTCTACTTTTTGATGTATTTGGCCTCATTGCCTTGCATCAGTTTCAATAAAAAT

GGTTGTGTACACaatgatgatgtagaggcgaggtgttttgaccacctttcaacaaaaat

ctatatctttcaacaaatgaaaccttgagttccctttgagtagaagtcaacatactcctt
gaatatgctatggtttccatggtctggatgaaacatgatgaatagaagtgaagttatatc
catgtcaaagtttttaatgtttaatttcattatgagaactttgatattacttctagcac
acattctctgaagtaattgtcagtttggtacttgaagggacctatattttcctattggg
gggggggggtgaataggcggtttataaccaattgtatatttgagaatatcttaatgtgga
attaaactaggtgaatatttttccaataaagggtgcttttattgactcacaatgtacca
tcaagggatacaatcataatgagtacacaatcgacatctacataatcaggttgcatacgg 10200
ccaacacacacacacgcacacacacattcacacacacaaatcatgctgacgaagagcgaa
gtcatacaagatcaaaactatgcctaggcggaggaagaatagaaaaacatgaagaaatga
aaaaccgtgactgacaacatactgaccatcgacgacaaacatctgtagacaacacaaaaa
ctgcgagaaaagttctataaaactggcgccttcgagaaggaaacgacgtgcaagagttgc
catcatcggatccaaccactaaggtcatatcctgggttttcatcctgaagatcaaatccg
agcaaactccgagtaatgtctttattagggtaacgattcaaaaaatgccacaatcatgag
```

FIG. 10G

ttatgaccaattagaccagacctaggatttttatccaaagctcgagacgggtactctaga
agtaccatccaattgaagtcatcccacttgcctcaatacaaatagttgcatagatgcacg
gtccatatggcgagtaatggacatgagcgcgcatgtgtaggttaacgtgacgtgacaaga
gcctgtcgccaccactcgacgaagtgtttgatggggaggaagaagtatggctccaccaac 10800
atcccaagtttgaaacattctagagcccccttaccatactcacaaagcgacaattgatgac
tatctgtatcagacgacaaatccatgtccgtcactcgctctatcttggtcattgacatac
tacctggcaaaggcggattcaagccccagacagcctgggcggccgc